REMARKS

Claims 1-15 remain in this application. Claims 2 and 5 have been amended at the suggestion of the Examiner to overcome the rejection to those claims. New claims 7-15 have been added to express Applicants' invention more fully.

Claims 1 and 5 were rejected under 35 U. S.C. 102 (e) as being anticipated by Miyajima et al. and claims 2 to 4 and 6 were rejected under 35 U. S.C. 102 (a) as being unpatentable over Miyajima et al. Applicants respectfully traverse these rejections.

The disclosure of Miyajima et al. is essentially as follows:

At first, in Figs. 1 and 2, Miyajima et al. discloses conventional block exposure (batch pattern drawing), in which a quadrangular electron beam passed through the plate 11 is used for drawing a desired pattern by selecting a batch pattern (block pattern) through data processing (data conversion). Also, in the specification, with reference to Figs. 8 and 13, there is a disclosure for drawing method using right angled triangle and parallelogram block patterns.

Fig. 8A shows a method for drawing a block pattern of the right angled triangle with correcting by a triangle that is not a right angled triangle (approximately right angled triangle) (Fig. 11). Fig. 8B shows a method for drawing a block pattern of a parallelogram with a correcting non-parallelogram (quadrangular shape having at least one pair of non-parallel edges: but approximately parallelogram) with approximate correction to a parallelogram (Fig. 13).

Miyajima et al. also discloses that, in a pattern including an oblique edge (triangle, parallelogram), for a block pattern (such as a pattern with arbitrary angle) not presented on stencil mark 12, a judgment is made whether it can be drawn by the block pattern presented in the stencil pattern, or approximate correction is to be performed in an effective block exposure.

Miyajima et al. also discloses a method of projecting a beam passed through the plate on the block pattern of the stencil mask 12 (conventional block exposure system), wherein the

deflector of Fig. 1 is adapted to project the beam passed through the plate 11 to the block pattern of the stencil mark. Despite what is shown here Applicants want to make it clear that Miyajima et al. does not disclose making the size of the block pattern variable by deflection.

This is where the presently claimed invention is patentably distinct from what is taught in the reference. That is, in contrast to this art, the claimed invention requires a deflection which makes the size of the parallelogram variable. Miyajima et al. fails to show this feature of the claimed invention. Also, the claimed invention is characterized by a fine parallelogram aperture (about 1 μm) for exposure of only the oblique portion so that an oblique portion may be drawn with such a fine parallelogram aperture. (See claim 2, for example). In this respect, it should be pointed out that when the pattern including an oblique line is to be drawn with several right angled triangles or small quadrangular shape, edge roughness occurs. According to the present invention, edge roughness can be eliminated by employing a fine parallelogram aperture and by drawing with varying size in the length direction depending upon the size of the pattern to be drawn.

In short, Miyajima et al. requires pattern processing (correction) by his CPU so that fixed size block patterns can be used effectively, and thus is based on the premises that the block pattern is not variable in size. In contrast to this, the claimed invention requires that the parallelogram beam (plus right angled triangle beam) be variable in size for drawing an oblique edge.

While Miyajima et al. discloses varying of size in a block pattern (called a "variable rectangular system"), when an oblique edge is be exposed, in Miyajima et al., it is done in the manners set forth at col. 1, line 60 to col. 2, line 22, col. 8, lines 18-52 and col. 11, line 38 to col. 12, line 15. (Copy attached.)

These passages in Miyajima et al. do not teach use of a parallelogram of variable size (variable length) in exposing and drawing an oblique edge or oblique line to avoid edge roughness. Applicants believe this difference is clearly brought out in the claims and that all

claims distinguish over the art and are in condition for allowance, prompt notice of which is respectfully solicited.

The Examiner is invited to call the undersigned at (202) 220-4200 to discuss any information concerning this application.

The Office is hereby authorized to charge any additional fees under 37 C.F.R. § 1.16 or § 1.17 or credit any overpayment to Deposit Account No. 11-0600.

Respectfully submitted,

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John C. Altmiller
Registration No. 25,951

KENYON & KENYON
1500 K Street, N.W., Suite 700
Washington, D.C. 20005
Tel.: (202) 220-4200
Fax.: (202) 220-4201
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